

SECTION 02510  
ASPHALTIC CONCRETE PAVING

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**LANL MASTER CONSTRUCTION SPECIFICATION**

When editing to suit project, author shall add job-specific requirements and delete only those portions that in no way apply to the activity (e.g., a component that does not apply). To seek a variance from applicable requirements, contact the LEM Civil POC.

When assembling a specification package, include applicable specifications from all Divisions, especially Division 1, General Requirements.

Delete information within "stars" during editing.

Specification developed for ML-3 projects. For ML-1 / ML-2, additional requirements and QA reviews are required.

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**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Asphaltic concrete paving.

**1.2 LANL PERFORMED WORK**

- A. Asphaltic concrete paving testing.

**1.3 SUBMITTALS**

- A. Submit the following in accordance with Section 01330, Submittal Procedures:
  - 1. Material certifications documenting compliance with the New Mexico State Highway and Transportation Department (NMSHTD) Standard Specifications.
  - 2. Proposed design mix of each class of asphaltic concrete.
  - 3. Laboratory test reports for design mix for asphaltic concrete.

**1.4 QUALITY ASSURANCE**

- A. Perform work in accordance with the NMSHTD Standard Specifications for Highway and Specifications for Roadway and Bridge Construction, Section 401, Plant Mix Bituminous Pavement.
- B. For mixing plan conform to the NMSHTD, Bulletin 102.
- C. Obtain materials from same source throughout project.

**1.5 JOB CONDITIONS**

- A. Do not place asphalt when base surface temperature is less than 40 degrees F.

- B. Apply prime and tack coats when ambient temperature is above 50 degrees F and when temperature has not been below 35 degrees F for 12 hours. Do not apply when base is wet or contains excessive moisture.

## PART 2 PRODUCTS

### 2.1 MATERIALS

- A. Provide plant mix bituminous pavement conforming to NMSHTD Standard Specifications for Highway and Bridge Construction, Section 401, Plant Mix Bituminous Pavement.
- B. Aggregates:
  - 1. Surface course: Provide aggregates conforming to the requirements of [Type I Grade A].
- C. Provide asphalt cement conforming to [85-100] penetration asphalt.
- D. Provide prime coat conforming to medium-curing 70 grade asphalt.
- E. Provide liquid asphalt tack coat conforming to NMSHTD Standard Specifications for Roadway and Bridge Construction, Section 407, Tack Coat.
- F. Provide lane marking paint of chlorinated rubber - alkyd type, conforming to FS TT\_P-115, Type III.

### 2.2 ASPHALTIC CONCRETE

- A. Provide asphaltic concrete with the following properties when tested in accordance with ASTM D1559.

Stability (Marshall)	1800 Minimum
Flow (Marshall)	7 to 16
Percent voids in compacted mix	3 to 5
Percent voids filled with asphalt	75 to 85
Percent asphalt by weight of Total Mix	5 to 7

## PART 3 EXECUTION

### 3.1 INSPECTION

- A. Verify compacted, treated base is ready to support paving and imposed loads.
- B. Verify grades and elevations of base are correct.

### 3.2 PREPARATION

- A. Remove loose material from compacted base surface immediately before applying prime coat.
- B. Proof roll prepared subbase surface to check for unstable areas and areas requiring additional compaction.
- C. Apply primer at rate of 0.20 and 0.50 gallons per square yard, over compacted subgrade. Apply material to penetrate and seal, but not flood, surface. Cure and dry as long as necessary to attain penetration and evaporation of volatiles.
- D. Apply tack coat to contact surfaces of previously constructed asphalt or portland cement concrete and to surfaces abutting or projecting into asphalt pavement. Distribute at rate of 0.05 to 0.15 gallons per square yard of surface.

### 3.3 PLACING ASPHALT PAVEMENT

- A. Place asphaltic concrete mixture on prepared surface, spread, and strike-off. Spread mixture at minimum temperature of 225 degrees F. Place inaccessible and small areas by hand. Place each course to required grade, cross section, and compacted thickness, as shown on drawings.
- B. Compact pavement by rolling. Do not displace or extrude pavement from position. Hand compact areas inaccessible to rolling equipment. Compact pavement to density and method specified in the NMSHTD Standard Specifications for Highway and Bridge Construction.
- C. Construct joints between old and new pavements, or between successive days' work. Construction joints to have same texture, density, and smoothness as other sections of asphaltic concrete course. Clean joint contact surfaces and apply tack coat.

### 3.4 TOLERANCES

- A. Flatness: Maximum variation of 1/4 inch measured with 10 foot straight edge.
- B. Compacted Scheduled Thickness: Within 1/4 inch of design thickness.
- C. Variation from True Elevation: Within 1/2 inch.

### 3.5 CLEANING AND PROTECTION

- A. Cleaning
  - 1. After completion of paving operations, clean surfaces of excess or spilled asphalt material to the satisfaction of LANL Construction Inspector.
- B. Protection
  - 1. After final rolling, do not permit vehicular traffic on asphaltic concrete pavement until it has cooled and hardened, and in no case sooner than six hours.

2. Provide barricades and warning devices as required to protect pavement and the general public.
3. Cover openings of structures in the area of paving until permanent coverings are placed.

### 3.6 PAVEMENT MARKINGS

- A. Sweep and clean surfaces to eliminate loose material and dust.
- B. Perform detailed layout of the pavement markings as shown on the Drawings.
- C. Painted lines: 4 inches wide.
- D. Colors: Yellow and White.
- E. Apply paint with a spray-type self-propelled pavement marking machine to produce uniform straight edges.

### 3.7 FIELD QUALITY CONTROL

- A. Submit proposed mix design of each class of asphaltic concrete to the LANL Construction Inspector for review, prior to commencement of Work.
- B. Provide a certified independent testing agency to perform the following:
  1. Take [three] 4-inch diameter test specimens for each completed course or per 4,000 square yards of pavement, at randomly selected locations, and perform the following tests:
    - a. Particle size distribution of extracted aggregates-ASTM C117 and C136.
    - b. Bulk specific gravity of compacted bituminous mixtures-ASTM D2726.
  2. Control field density in accordance with ASTM D2950, nuclear method.
    - a. Take [three] field test per each [4000] square yards of pavement.
    - b. Compare density of in-place material against laboratory standard mix design of same asphaltic concrete mixture.
    - c. Minimum acceptable density of in-place course material is [ 94 ] percent of the recorded laboratory mix design density.
- C. Provide unobstructed access to Work and cooperate with appointed Testing Laboratory.

END OF SECTION